R and D in Defence Services

1363. DR. BAPU KALDATE; Will the Minister of DEFENCE be pleased to state:

ia) what are .the existing areas of Research and Development in the Defence Services together with the achievements made so far in the development and production of defence equipments;

(b) what is the annual expenditure incurred on the Research and Development; and

(cj whether Government proposes to enhance the areas of research and development in the defence services; if so, what are the details thereof?

THE MINISTER OF DEFENCE (SHRI SHARAD PAWAR); (a) The existing areas of Defence Research and Development are aeronautics, armaments and explosives, electronics & instrumentation, combat vehicles, engineering equipment, naval systems, rockets & missiles, computers and simulation, materials, terrain research, work-study, life sciences, food technology, high altitude agriculture and nuclear medicine.

DRDO has made significant achievements in its efforts to meet the requirements of (three Services. Number of defence systems, equipments and stores designed and developed by DRDO' have been productionised and introduced in Service use. Notable examples of DRDO's achievements are light field gun, illuminating ammunitions of various calibres, mines and fuzes, cluster bomb, charge line mine clearing system, FSAPDS anti-tank ammunition, gun and rocket propellant, artillery rockets, electronics' counter measure rocket system, reusable rocket pod, aircraft simulator, various tynes of brake parachutes, balloon barage system, specialist role vehicles for field use by Armv, bridse layer tank, manually launched military bridging system, communication equipments for Army, various types' of nieht vision devicets. battlefield survellance radar, satellite communication terminals, electrnoic warfare svstems, low level radar INDRA, IFF (Identification of Friend or (e) system, naval sonar and sonobuoy system, modification of torpedoes, advanced materials and alloys, special ready to eat food items, electro-medical equipments etc. In addition, number of sophisticated state-of-the art systems namely missiles, main battle tank, pilotless target aircraft, submarine sonar, advanced computing systems etc are in advanced stages of development and evaluation.

(b) The gross expenditure of DRDO during 1990-91 was Rs_ 700 crores and Budget estimate for the current year 1991-1992 is for Rs. 691 crores.

(c) The enhancement Of defence R&D acticities, infrastructure and competence is a continuous process. Increasing allocations have been made for defence R&D in the past years. Number of ab-initio development projects have been taken for state-of-the-art weapon systems, platforms, sensors and equipment. R&D work is also in progress in number of emerging/ frontier defence technologies.

Testing of short rangs SAM

1364. SHRI SURESH KALMADI: Will the Minister of DEFENCE be pleased to state:

(a) whether it is a fact that Indian Defence Scientists have successfully tested a short range surface to air missile in a triple battlefield role for the Army, Navy and Air Force; and

(b) if So, whether Government propose to put this missile into quantity production?

THE MINISTER OF DEFENCE (SHRI SHARAD PAWAR): (a) and (b) Yes, Sir.